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数理解析研究所講究録1397

Microlocal Analysis and Asymptotic Analysis

京都大学数理解析研究所

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Preface

This proceedings is dedicated to

Professor Louis Boutet de Monvel,

who has made substantial contribution to the progress of microlocal analysis and asymptotic analysis, and who has made much effort toward the better communications between French mathematicians and Japanese mathematicians.

We sincerely thank RIMS and Keio University for their financial supports, which were disbursed respectively by 21st century COE program "Formation of an International Center of Excellence in the Frontiers of Mathematics and Fostering of Researchers in Future Generations" and 21st century COE program "Integrated Mathematical Sciences".

August, 2004, in Kyoto

Organizing Committee:
Takahiro KAWAI (RIMS; chief)
Nobuyuki TOSE (Keio; deputy chief)
Susumu YAMAZAKI (Nihon)
Naoto KUMANO-GO (Kogaku-in)

The symposium

Microlocal Analysis and Asymptotic Analysis

was held at RIMS from March 8 through 12, 2004. Its program was as follows:

March 8 (Monday)

L. Boutet de Monvel (Paris VI)
Related Toeplitz and semiclassical star-algebras

J. Sjöstrand (Ecole Polytechnique)
Semi-classical analysis for the Fokker-Plank equation

T. Aoki (Kinki), T. Kawai (RIMS), T. Koike (Kyoto) and Y. Takei (RIMS)
On the exact WKB analysis of microdifferential operators of WKB type

March 9 (Tuesday)

B. W. Schulze (Potsdam)
Operators on corner manifolds with exits to infinity

I. Witt (Freiburg)
Mixed initial-boundary value problems for weakly hyperbolic operators

S. Nakamura (Tokyo)
Propagation of homogeneous wave front set for Schrödinger equations

S. Fujiie (Tohoku)
Quantum monodromy and resonances associated with a homoclinic orbit

March 10 (Wednesday)

Y. Laurent (CNRS, Grenoble)
Regularity of the D-module associated to a symmetric pair:
Solution to a conjecture by Sekiguchi

I. Waschkies (Nice)
The microlocal Riemann-Hilbert problem on a contact manifold

T. Kawai (RIMS), T. Koike (Kyoto), Y. Nishikawa (RIMS) and Y. Takei (RIMS)
On the Stokes geometry of higher order Painlevé equations I

H. Tahara (Sophia Univ., Tokyo)
On the singularities of solutions of nonlinear partial differential equations in the complex domain

March 11 (Thursday)

B. Gramsch (Mainz)
Fréchet operator algebras in the perturbation theory of the microlocal analysis

M. Ruzhansky (Imperial College, London)
Global calculus of Fourier integral operators, weighted estimates, and applications to global analysis of hyperbolic equations

A. D'Agnolo (Padova)
Algebroids of WKB-differential operators on symplectic involutive manifolds (part I)

H. Majima (Ochanomizu)
Asymptotic analysis for confluent hypergeometric differential equations in many variables

P. Nang (Tsukuba)
Algebraic description of D-modules associated to 3×3 matrices

R. Bahloul (Kobe)
Existence of Bernstein-Sato polynomials by using the analytic Gröbner fan

March 12 (Friday)

O. Liess (Bologna)
On the kernel theorem in hyperfunctions

P. Polesello (Paris VI/Padova)
Algebroids of WKB-differential operators on symplectic involutive manifolds (part II)

T. Kawai (RIMS), T. Koike (Kyoto), Y. Nishikawa (RIMS) and Y. Takei (RIMS)
On the Stokes geometry of higher order Painlevé equations II

T. Kawai (RIMS), T. Koike (Kyoto), Y. Nishikawa (RIMS) and Y. Takei (RIMS)
On the Stokes geometry of higher order Painlevé equations III

T. Kawai (RIMS) and Y. Takei (RIMS)
Announcement of Toulouse Project Part II

Microlocal Analysis and Asymptotic Analysis

研究集会報告集

２００４年３月８日～３月１２日

研究代表者　河合　隆裕 (Takahiro Kawai)
副代表者　戸瀬　信之 (Nobuyuki Tose)
山崎　晋 (Susumu Yamazaki)
熊ノ郷　直人 (Naoto Kumano-go)

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